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ABSTRACT

Although the argument that comprehension is a cognitive process is extremely convincing, the fact that comprehension can be assessed only through some sort of interaction makes this view inadequate as a base for reading/literature curricula. Questions, context, and teacher-student interaction can all influence a student's comprehension. It is also assumed that comprehension can be assessed objectively, but research has shown that examiners' different frames of reference can have considerable effect on question wording and on student scores. A third assumption underlying reading/literature curricula is that readers use some sort of schematic representation of text to guide the encoding and retrieval process and that an ideal story structure exists that corresponds with readers' schemata or expectations. Research indicates, however, that story structure is reflected in internal representation and that the complexity of internal representation increases developmentally, possibly subject to individual learning styles. Despite the limitations of these assumptions, reading/literature curricula in the schools have been based on the premise that meaning is literal, convergent, and objective rather than subjective or private. Because of the accountability demands of schooling, it is in the interest of school systems to adopt these assumptions and gloss over their inadequacies, a possibly unresolvable dilemma. (HTH)

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HOW ADEQUATE ARE THE ASSUMPTIONS UNDERLYING LITERATURE COMPREHENSION IN THE MIDDLE GRADES?

Mary Thomas Farrar

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There are a number of assumptions upon which literature curricula are based. For purposes of clarity and convenience, these have been divided into two groups, those concerned with the nature of story comprehension and those concerned with the nature of instruction. In this paper, those assumptions concerned with the nature of story comprehension will be discussed. Assumptions concerning the nature of instruction have been treated elsewhere (Farrar, 1981).

The assumptions concerning the nature of story comprehension that are reflected in literature curricula, are derived, for the most part, from psychology and literary criticism. These assumptions have their origin in the literalist or referential view of meaning, a view dating back to the Aristotelian conceptualization of the world as ordered into named categories prior to man's perception of it. This view was reflected in the writings of Augustine and generally accepted until this century. As Griffen and Mehan (1978) state:

> The referential conception of language treats words as signs which can point to, direct attention to, report, denote, connote, signify, stand on behalf of, or otherwise indicate something else (Langer, 1944; Cassirer, 1945; Morris, 1946; Ogden and Richards, 1935). Although not always physical entities, referents can best be thought of as "objects" in the world. Referents can either be

> physical (in the sense of natural things without life or consciousness such as chairs, tables, pens) or they can be such non-material aspects of the world as centaurs and unicorns. Referents can also be social objects ... social in the sense that they are matters or affairs which involve humans in events or situations. Referents, in short, are anything that stands in relationship to signs (pp. 1-2).

Such a conception is overly simplified because it presents a purely cognitive view of language and perception at the expense of those interactional factors which influence, alter and even create language and perception. However, based on this referential conception of meaning, a number of psychological theories have been developed. These theories have then been used as the rationale for reading and literature curricula. The mos important are (a) that comprehension is a cognitive process, (b) that comprehension is measurable in absolute terms, and (c) that internal representation reflects external representation. Each of these assumptions will be examined in turn.

Comprehension is a Cognitive Process

Perhaps the most convincing, though intuitive, argument that comprehension is a cognitive process is derived from introspection. We are all aware that some sort of process is

occurring in our minds when we engage in activities involving recalling stories, events, etc. In the twentieth century two schools of thought have developed, each offering different explanations of these processes. The two conceptions are known by a number of terms including "conceptually driven" vs. "data driven" theories or "top down" vs. "bottom up" theories. In conceptually driven theories, the cognitive process is conceived of as being active. Processes are described by constructs like schemas and advance organizers. Conversely, in data driven theories, the cognitive process is thought of as being passive and described by terms like stimulus-response and association.

Conceptually driven theories may well have had their origin in the writings of Kant who described schema in the following terms:

> The schema of a concept ... signifies a rule according to which my imagination can delineate in a general manner, without limitation to any single determinate figure. (1781/1963, pp. 182-183).

Following Kant, Bartlett (1934/1964) developed schema theory. Piaget then followed specifying schema processes as assimilation and accommodation. Later in this century, the role of inference, seen as an active cognitive process received attention, initiated in the work of Bransford and Franks (e.g., 1971) and followed by many others. The writings of the LNR research group (e.g., Norman and Rummelhart, 1975),

Kintsch, (1974) and others represent a fairly recent and well received version of conceptually driven theories.

In reading, the psycholinguistic theories of Smith (e.g., 1971) and the theories and practices advocated by Goodman (e.g., 1967) have been widely accepted. Both the language experience approach to reading and individualized reading programs have been based on these "top down" theories.

Data driven theory has also had its proponents, perhaps receiving its most renowned exposition in Skinner's behaviourism, though also espoused more recently by influential writers such as Anderson and Bower (e.g., 1973) and Gibson (e.g., 1969). The so-called linguistic readers have been based on these more data driven theories.

Although the conceptualization that comprehension is a cognitive process, (whether "top down" or "bottom up" or a combination of the two) is extremely convincing, one aspect of it remains disquieting. The way in which comprehension is made visible is through some sort of interaction. Comprehension cannot be assessed except through some sort of interaction so it must be that verbal or written interaction influences what is displayed as comprehension. (i.e., the student's response.) The influence of verbal interaction on student comprehension display can be seen to be occurring in a number of ways. For example, if a question is worded "Why did the hero hunt down the dragon?" and it receives the response "Because he wanted to kill the dragon so he could

marry the princess", the response indicates that the student knows more than if the question was worded "Do you think the hero hunted down the dragon so he could marry the princess?" to which the student might respond "yes". Different phrasings of elicitations make different demands on the complexity of the response required and consequently on the student's comprehension display which in turn will affect the teacher's assessment of that student's comprehension.

A second way in which interaction may affect comprehension in the school setting has to do with student expectation. It seems reasonable to suggest that if the teacher always asks questions about characterization, then the student might read the book with a view to being able to answer questions about characterization. She might focus on characterization during her reading at the expense of other aspects of the book. Harste and Burke (1978) and Mosenthal and Na (1980) have distinguished between different types of reading based upon such social or situated meaning. They suggest that readers process text differently according to the different demands of different social situations, and that their reading will vary depending on what, for whom and where they are reading.

A third way in which interaction may affect comprehension or at least comprehension display, is in inhibiting student response. Labov (1969) described one child, for example, who answered in monosyllables when being interviewed by the teacher,

but later, when talking in a comfortable situation eating potato chips with friends, appeared to be verbally outgoing.

It could be argued that even if comprehension display might be altered, the student's comprehension itself, might not be. But such an argument seems untenable for at least two reasons. First, the teacher's phrasing may alter comprehension. For example, when the teacher includes a hint in the elicitation, the student may begin to comprehend more about the story than she did when she had read it initially and so her response, if she takes up the hint, will be a product of the interaction. This is the purpose of hinting. A second argument has to do with recipient design. When one talks about a book with different people, one discusses different aspects of the book depending on the hearer's interest. When certain elements of the book are isolated for discussion and when these isolated observations are recombined with the hearer's comments, one's comprehension is altered.

In sum, although the conception that comprehension is a cognitive process is valid, one needs to be careful about assuming that it is also sufficient. Although a student may read a book or story and comprehend a good deal, interactional factors may influence a student response and thereby the teacher's assessment of her comprehension. Because there are ways in which interaction affects both comprehension and comprehension display, the assumption that comprehension is a cognitive process only, is incomplete.

Comprehension is Measurable in Absolute Terms

It is assumed that what has been comprehended can be assessed objectively through the use of comprehension questions. Teacher's manuals, as well as many psychological tests (e.g., I.Q. tests) are based on the assumption that regardless of who asks them, the questions will measure comprehension in a pretty standard fashion. Mehan (1978) has shown, however, that different examiners can have considerable effect on student scores for a number of reasons. He outlines the assumptions on which testing is based as follows:

> Test takers are assumed to have underlying mental abilities that are defined as previously learned experiences. These experiences are generally concerned with substantive matters like names, dates and other factual information. Another assumption is that tests actually measure abilities. In sampling previously learned experiences, test questions are supposed to elicit responses that index the test taker's underlying abilities. In order to answer questions correctly, respondents must make the appropriate link between the question asked and the test materials. Another testing assumption is that correct answers to test questions signal the presence of underlying abilities while incorrect answers indicate their absence. A fourth assumption is that

> the meaning of test items, instructions, questions and answers is shared by testers and respondents; that is, they share a common culture. The influence of the testing situation is also assumed to be minimal, with respondent's behaviour considered to be solely the result of their underlying abilities, and the stimulus questions asked. Finally, it is assumed that testers play a passive role, merely recording the behaviour of respondents. (Pp. 49-50).

In order to show the weaknesses of these assumptions, discourse studies of educational testing have been conducted following three avenues: studies of item meaning, studies of the negotiation of measurement, and studies of answer assembly. In studies of item meaning (e.g., MacKay, 1973; 1974; Mehan, 1973; Mehan and Roth, 1974) children's perceptions of testing materials have been examined. It has been shown that children may use frames that are different from those of the tester in reasoning out a response and that, unless the tester probes as to the reasons why a certain response was forthcoming, he will not be aware of whether or not the student has used the expected reasoning patterns and an incorrect response will be counted as incorrect whether or not the child's actual reasoning justifies it. For these reasons, it cannot be said that correct test answers signal the presence of certain underlying abilities while incorrect answers indicate their absence.

A second line of investigation has been the negotiation of measurement. Mehan (1973) found that test takers replies

were not the automatic result of using stimulus questions. In fact, the tester had to determine which, of a number of acts, actually constituted a test taker's answer. The tester would actively construct and interpret what would count as an answer from portions of the student's behaviour. A student's test score thus varied according to what the tester selected.

A third line of investigation is that of assembling answers to test questions. Here, as Mehan (1978) has shown, testers, when they are supposed to ask a question, accept the answer, and proceed to the next question, may tend to prompt by asking the student an additional question such as "Can you think of anything else?", before proceeding to the next. In this way, they help the student to come forth with a more complete answer, one worth more points.

Heap (1980a) too has formulated the problems involved in comprehension assessment. He has organized them under three main headings: the Resource Problem, the Frame Problem and the Preference Problem. According to the Resource Problem, one can never know whether or not student comprehension is as a result of the student's having read the story or whether it comes from some other source such as the student's having heard the story before. The Frame Problem is that the student may be coming to the interaction with a different frame of reference. For example, if asked whether elephants can fly, he might respond "yes", thinking of Walt Disney's

Dumbo. The Preference Problem is that the student may state only what she believes the teacher wants to hear rather than all she knows about the subject.

The inevitable conclusion to be reached from the studies outlined above is that comprehension cannot be measured in absolute terms. Thus the second assumption must be considered incorrect.

Teachers' manuals for reading/literature programs invariably contain comprehension questions and teachers use comprehension questions in schools? Why? Either the questions are included for assessment purposes or as aids to instruction or both. If they are included for purposes of assessment, then the shortcomings of such an approach have been outlined above. If, on the other hand, such questions are intended for purposes of instruction, then such shortcomings may not apply. Others, however, become apparent.

In the past, classroom questions have been categorized in a number of different ways such as cognitively complex vs. cognitively simple or test vs. developmental vs. true information questions. Both cognitively complex and cognitively simple as well as developmental and possibly true information questions have been considered instructional in contrast with test questions: they have been considered capable of stimulating students' cognitive processes. Generally, cognitively complex questions (e.g., "why" questions) have been considered superior to cognitively simple or factual recall questions.

Such an assumption is misleading, however; it does not take into account the social values of questions. Direct "why" questions, for example, may be intimidating causing a lack of response while simple factual questions may seem necessary on occasion to encourage the student to respond or to provide necessary background knowledge prior to the asking of a cognitively complex question. One very effective question form appears to be an explicit cognitively simple question masking an implicit cognitively complex question such as "Do you think the author had a special reason for naming the book ...?" where the response to the explicit "Do you think?" question would be "yes" or "no" but where an implicit "why?" question such as "Why did the author name the book ...?" is perhaps implied (Farrar, 1981). Distinctions between explicit and implicit meanings tend not to be discussed in the literature on teacher questioning perhaps because it is assumed that meaning is explicit.

Considering that the effectiveness of a given question type clearly depends on the context in which it is asked, it seems curious that manuals suggest ideal questions at all. Given the shortcomings of questions used as instruments of assessment and the fact that the effectiveness of questions used for purposes of instruction depends on the context in which they are used, the writers of manuals might be better advised to list the points they feel ought to be covered and to suggest that the choice of most effective questions type

be worked out by the teacher in the classroom context.

Internal Representation Reflects External Representation

It has been a common assumption underlying both psychological research of prose processing and literature instruction, that readers use some sort of schematic representation of text to guide the encoding and retrieval processes. It has been assumed that internal story structure is isomorphic with external story structure, that an "ideal" hierarchical story structure (reflecting the external structure exists which corresponds with readers' schemas or expectations. This theory had its origins in Propp's (1956) Morphology of the Folk Tale. On the basis of Propp's ideas, several attempts have been made to devise rules for story grammars (e.g., Rummelhart, 1975, 1977; Mandler and Johnson, 1977; Stein and Glenn, 1977; Thorndyke, 1977) and paragraph grammars (Frederikson, 1977; Mayer, 1977; Norman and Rummelhart, 1975) to test the validity of the assumption. Subjects have been required to recall and produce stories and paragraphs and to make intuitive decisions concerning the relative importance of given linguistic units within a text hierarchy. Research seems to indicate that certain elements of text are recalled preferentially over others. For instance, outcomes are recalled more often than character motivations and main events will be recalled over supporting details. Developmental

differences have also been noted. Results appear to have validated the hypothesis that internal story structure reflects an 'ex post facto' hierarchically organized external story structure.

Despite the convincing evidence, certain things feel wrong about this conceptualization. The first is the ex post facto nature of the hierarchical construct. Why should a text organization, derived from analyzing a story into component parts after it has been read, describe how the story may be represented internally? Mosenthal (1979) has attempted to address this issue and has shown that recall is not only a function of paragraph structure but also a function of internal schema structure (i.e., learning style). In sum, research in story grammars suggest that hierarchical story structure is reflected in internal representation and that the complexity of internal representation increases developmentally possibly subject to individual learning styles.

Other research complementing the story grammar research is that on inferences, driving them, for example, into categories like enabling inferences and elaborative inferences (e.g., Hildyard, 1976). Such research further supports the assumption that internal representation is a schematic representation of text in a curious way. For, although inferences are not literal or explicit but instead are made where information is not explicit in the text, certain inferences (enabling inferences) must be made if the story

structure meaning is to be comprehended. Elaborative inferences, on the other hand, consist of personal embellishment of the story and are considered to be an interesting though apparently unnecessary feature.

The reason for examining the whole issue of story schemas has been to point out the truly limited view of comprehension on which this conceptualization is based. It is being assumed in all the studies on story grammar and inference that comprehension and story structure are synonymous. And yet, as has been shown, the assumption that internal representation reflects external representation is incomplete.

Despite its limitations, however, this is the view that has, unfortunately, been adopted by the school systems. Reading/literature curricula in the schools, have been based on the assumption that meaning is literal, convergent and objective rather than subjective or private (See Figure 1). In their acceptance of this assumption they might also be described as following the analytic school of literacy criticism (rather than the structuralist school which stresses the readers internal structures or the psychoanalytic school which stresses deep seated Freudien meanings). Such a view is also in keeping with the psychological conceptualization of internal and external structure discussed above.

The most influential literary critic of the analytic school has been Northrop Frye. Frye (e.g., 1964) has suggested that students be taught basic story forms and that

they then analyze the stories they read according to these basic structures. Although literature curricula in the schools do not ascribe to Frye's four basic forms, the emphasis on story structure is pronounced.

But, a person's interpretation may differ from the external story structure in a number of ways. First, as Mosenthal (1979) has pointed out, individual schemata may interact with the text schemata to influence recall. Second, as Pitchart and Anderson (e.g., 1977) have shown, recall varies according to a subject's perspectives. People interpret facts differently. Frames or schemata for different biases seem to superimpose structure on any given literal meaning. (Similar arguments are presented by the structuralist school of literacy criticism, e.g., Rosenblatt, 1968). A third way in which comprehension may differ from external story structure is through the deep-seated Freudian meanings which are the subject of studies for psychoanalysts. Bettelheim (1976) for example, has shown how fairy tales exemplify Freudian complexes. In addition, there are ways in which interaction may affect comprehension, such as those described previously.

There is an inherent paradox in any formulation of comprehension caused by the fact that humans are both unique individuals, different from any other and the fact that humans are social animals, members of groups and members of language communities. Because every individual is unique, meaning must

ultimately be subjective (i.e., divergent) or even private (i.e., incommunicable). Maruyama (e.g., 1961) has argued this point succinctly. And yet, paradoxically, through the process of mutual organization, people communicate with one another for all practical purposes. Thus there will be both similarities and differences among different individuals and their comprehension of a given story. Some comprehension will be held in common with other group members while some comprehension will be subjective, even private, consisting of associations known only by one.

Not only do people read and select from a piece of literature that which is meaningful to them personally, but any given individual may read different materials differently. It may be that adults as well as children are free to choose how they will read; they may read to determine the macrostructure of the text (particularly, one would think in testing situations or when reading detective stories, for example); they may read to determine the macrostructure as well as to pick up apparently random insights, perhaps in reading novels, for example, or they may read only for feeling and insight, in reading poetry for example. Though these are gross examples, to suggest that comprehension is a reflection of external hierarchical structure is very limited. Recall of story structure is only one aspect of comprehension. Perhaps the other side of comprehension, an aspect that is even more important, is that of discovering insights, of connecting

what is read with one's life, thoughts and experiences, of making elaborative inferences, of comprehending beyond, or before or other than what is provided by the structure.

In light of the fact that comprehension is multi-faceted, the continued emphasis in literature curricula on the assumption that literary meaning or story comprehension is a reflection of external story structure seems peculiar. Such emphasis can be seen in the teacher's manual for the Young Canada Reader, Grade Six (Bowers, et al., 1966). Although somewhat dated, this reader is popular among Canadian teachers today and both the emphasis on reading comprehension skills and the types of questions suggested in the teachers' manual, are valid examples of the kind of thing found in most reading/literature texts of the fourth, fifth and the sixth grades.

Teacher's manuals tend to stress the teaching of literal comprehension and formal standards of literary appreciation such as the following:

> One essential step is the literal interpretation of what the writer has said. This demands ability such as Finding the Main Idea, Noting Details and Recognizing Sequence. A second level demands more than literal interpretation; it requires critical evaluation to get the full significance of what the writer has said. At this level, skills such as the following will be used: Making Judgements, Drawing

> Conclusions, Predicting Outcomes and Finding Proof. At a still higher level, literal interpretation and critical evaluation of thought will be accompanied by the literary skills. These will range from Imaginative Picturing to Appreciation of Literary Beauty, Style and Form. (Young, Canada Reader Teachers' Manual Grade Six, 1966, p. 17.)

As can be seen from the above quote, the emphasis is on comprehension of external story structure. Such an emphasis is supported in the questioning suggested for teachers to use with their classes. The assumption concerning the hierarchical nature of story structure is also supported here. Suggested questions are ordered so that a main idea question will be the first question in a series, followed by questions addressing supporting details or arguments. Here are a couple of examples from the same manual:

> 1. Prove that the plovers are under almost complete control of the instinct of migration (e.g., all save the young leave; they slow down only to eat; some dying and some being shot).
>
> 2. How does the subtitle indicate that the act of migration resembles an act of intelligence?
>
> 3. Point out other details of the migration which show that instinct at times works somewhat like intelligence? (1966, p. 126).

Here, the Main Idea, that plovers are under almost complete

control of the instinct of migration is presupposed in the first question, the supporting details are requested in the response, while the ensuing questions expand upon the topic.

Reasons why literature curricula appear to focus on story structures might be as follows. First, a course has to consist of a certain body of knowledge to be covered. If a course were to include all the personal observations of all the students, completion of the course would be impossible. Second, it is easier to assess whether or not students appear to have factual knowledge than whether or not they have understood, agreed or disagreed with differing opinions. Third, it is expected that instruction should focus on measurable knowledge of elements of the novel such as theme, plot, characterization, not on personal insights, an aspect of comprehension which is difficult to measure. Thus, while it is clear that the assumption that internal representation reflects external story structure is an incomplete view of comprehension, it is equally true that the adoption of this apparently inadequate view of comprehension is compatible with the demands of schooling.

Summary

The three assumptions concerning story comprehension and based on the referential notion of meaning discussed above have been shown to be lacking. The first assumption,

that comprehension is a cognitive process was seen to be incomplete because the influence of interaction on both comprehension and comprehension display was not taken into account. The assumption that comprehension is measurable in absolute terms, was found to be incorrect because of various limits to certainty in assessment. Finally, the third assumption that internal representation reflects external text or that meaning is literal, convergent or objective was found, once again, to be incomplete; it presents an extremely narrow picture of what comprehension is. Yet, despite the fact that these assumptions can be shown to be inadequate theoretically, these assumptions continue to underly literature curricula in the middle grades. Why? Given the demands of schooling (namely that student and teacher are accountable for covering certain courses and that the student is responsible for acquiring knowledge, skills and attitudes consonant with being educated and responsible citizens), it is in the interest of school systems to adopt the assumptions and to gloss over their inadequacies. School systems are organized in grades and presumably a certain amount and type of material is covered in each grade allowing for a certain amount of standardization. If it were really believed that interaction created comprehension, that no tests of comprehension were valid and that subjective or personal meaning was more important than learning objective facts and structures, then the whole conception of schooling as covering courses would have to be altered.

The teacher is put in a most trying dilemma. For, on the one hand, he may realize that comprehension and comprehension display may be influenced, even created, by instruction, that there are limits to certainty in comprehension assessment and that literary meaning is multi-faceted. He may wish to discuss the selections meaningfully, where, to paraphrase Plato, conversation should go where the wind blows it. And yet, the teacher, in the school system, is caught up in the day-to-day demands of covering courses and assessing comprehension. I believe, regretfully, that this dilemma may be unresolvable.

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Figure I

ASPECTS OF MEANING

Non-communicable		Communicable	
	L		
	A		
	N		
Private Meaning	G	Public Meaning	
→	→		
(e.g., aesthetic experience)	U	Divergent	Convergent
	A	Subjective	Objective
	G	Meanings	Meanings
	E	Differing	According
		According	To Group
		To Individual	Consensus
		Perspective	